

Notes

Göran THOR^a, Tor TØNSBERG^b, Hiroyuki KASHIWADANI^c and Kwang Hee MOON^d: *Lecidea roseotincta* New to Asia

アジア新産の *Lecidea roseotincta* (シコウチイ, 新称) (G. トール^a, T. トンスベリー^b, 柏谷博之^c, K. H. ムーン^d)

***Lecidea roseotincta* Coppins & Tønsberg**

Thallus thin, whitish gray, partly pink to red and K + red. Apothecia common, c. 0.5 mm in diameter, round, black. Asci with (8–)16 spores. Spores slightly constricted at the middle, simple or sometimes 1-septate and 12–15 × 6–8 µm. Chemistry: psoromic acid.

Specimens examined. **JAPAN.** Hokkaido. Teshio Prov., Rumoi-gun, Obira-cho, 25 km ENE of the small town Obira at the coast, Kawakami area, 140 m, 44°06'N, 141°58'E, 28 May 1995, Thor 13518 (TNS); Kitami Prov., Wakkanai city administrative area, 17 km SE of Cape Soyamisaki, 1.5 km from the sea and S of small gravel road, 10–20 m, 45°24'N, 142°03'E, 4 June 1995, Thor 14024 & 14036 (TNS, UPS), Tønsberg 22559 (BG); Kitami Prov., Wakkanai city administrative area, 7 km S of Cape Soyamisaki and 2.5 km from the coast, just W of Opirashunai bridge over the small Opirashunai stream, 20 m, 45°28'N, 141°57'E, 3 June 1995, Tønsberg 22545 (BG); Kitami Prov., Soya-gun, Sarufutsu-mura, 12 km NW of Hamatombetsu town, 8 km SE of Poronuma Lake, S and N of new gravel road from road 238 to the coast, 1.5 km from the sea, 30 m, 45°13'N, 142°15'E, 4 June 1995, Thor 14112 (TNS); Kitami Prov., Esashi-gun, Hamatombetsu-cho, 9 km S of Hamatombetsu town, just S of small gravel road, 50 m, 45°03'N, 142°23'E, near the stream Usotan-gawa, 4 June 1995, Thor 14196, 14201 (TNS, UPS); Kitami Prov., Esashi-gun, Esashi-cho, 2 km S of the town Honcho, just SW of road 238, 10–20 m, 44°55'N, 142°35'E, 5 June 1995, Thor 14241 (TNS); Ishikari Prov., Kamikawa-gun, Kamikawa-cho, c. 1 km E of Obako Gorge Tourist Centre, along small gravel road mainly towards N from crossroad just N of Niseicharomappu-gawa stream and c. 2 km to the N, 720–770 m, 43°42'N, 143°01'E, S to W-facing slope, 10 June 1995, Thor 14613 (TNS); E of Obako Gorge Tourist Centre, along the gravel road S of the river, 43°42'N, 143°01'E, 710–720 m, 10 June 1995, Tønsberg 23119 (BG); Ishikari Prov., Kamikawa-gun, Kamikawa-cho, along trail from the end of the chair-lift and to the top of Mt. Kurodake, 1550–1600 m, 43°42'N, 142°55'E, 11 June 1995,

Tønsberg 23220 (BG). **KOREA.** Cheju Island, Namcheju-gun, Namwon-up, along the Songpanak trail on the east slope of Mt. Halla, from the Songpanak National Park Office to the Azalea Field Shelter, 750–1500 m, 33°23'N, 126°37'E, 28 May 2001, Thor 17424, 17426 (TNS, UPS).

Notes. The species is usually easily distinguished in the field by the pink to red thallus. The microscopic characters (see above) and the chemistry are also diagnostic.

Habitat. During a field trip, to Hokkaido, Japan in 1995 by GT and TT and to Cheju Island, Korea by GT, HK and KHM in 2001, numerous lichens were collected. Based on these collections *Lecidea roseotincta* is reported as new to Asia. The GT collections are housed in TNS (some duplicates in UPS) and the TT collections in BG.

Of the Japanese islands, Hokkaido in the north is second to Honshu in size. It stretches 400 km from north to south, and 440 km from east to west. Cheju Island is a volcanic island, situated about 100 km south of the Korean Peninsula. It is Korea's largest island. Mt. Halla (1950 m), the highest peak in Korea and a national park, rises at the centre of the island. The summit of Mt. Halla is free from clouds only about one day in 10, and the island has the Republic of Korea's highest average precipitation, 1400 mm.

On Hokkaido *L. roseotincta* was found in deciduous and mixed open forests. The forests where it was found were oldgrowth, except one, where when it occurred in a mixed *Abies sachalinensis* and *Larix* plantation (GT 14241). On Cheju Island it was found in an oldgrowth deciduous forest dominated by *Acer*, *Carpinus* and *Quercus*. The humidity was always high and stable, and it was found in marshes, bogs or other wet forests, almost

always near a small stream. The species was growing on smooth bark. On Hokkaido it was growing mainly on *Alnus* but also on *Salix*, *Sorbus americana* ssp. *japonica* and once each on *Abies sachalinensis* and *Betula ermanii*. On Cheju Island it was found on *Berberis* and *Cornus*. The lichen flora occurring on Mt. Halla is more or less the same as those found in the mountain regions of Japan. Foliose species found on trees include, e. g., *Anaptychia palmulata*, *Anzia opuntiella*, *Collema japonicum*, *Fuscopannaria ahlneri*, *F. incisa*, *Heterodermia hypoleuca*, *Leptogium cyanescens*, *Lobaria discolor*, *Nephroma helveticum*, *Parmelia laevior*, *Peltigera polydactylon* and *Phaeophyscia pyrrophora* (Kashiwadani et al. 2002). Crustose lichens accompanying *Lecidea roseotincta* include, e. g., *Buellia* sp., *Graphis* sp., *Lecanora* spp. and *Ochrolechia* sp.

Distribution. *Lecidea roseotincta* was found in several localities on Hokkaido and in one on Cheju Island. It was never abundant, and it was searched for in several other localities in Japan and Korea without success. This indicates that it is rare. *Lecidea roseotincta* was rather recently described from Norway (Coppins and Tønsberg 1988).

It has later been reported also from Sweden (Muhr 1991), North America (Tønsberg 1993, 2004) and the Western Pyrenees (France) (Boom et al. 1995). Most of Hokkaido and Cheju Island belongs to the temperate and boreal vegetation zones (Hämet-Ahti et al. 1974, Kashiwadani et al. 2002). With the presently cited localities, *Lecidea roseotincta* shows an oceanic, incompletely circumpolar (Amphi-Atlantic and Amphi Pacific) distribution type (Fig. 1) similar to that discussed by Hämet-Ahti et al. (1974) for lichens of the boreal coniferous zone. The species is likely to be found also in other mountain regions with temperate or boreal vegetation and a suboceanic climate in Asia. Several other boreal and temperate lichens reported from northern Europe and North America are certainly to be found also in Asia, and thus show a northern circumpolar distribution.

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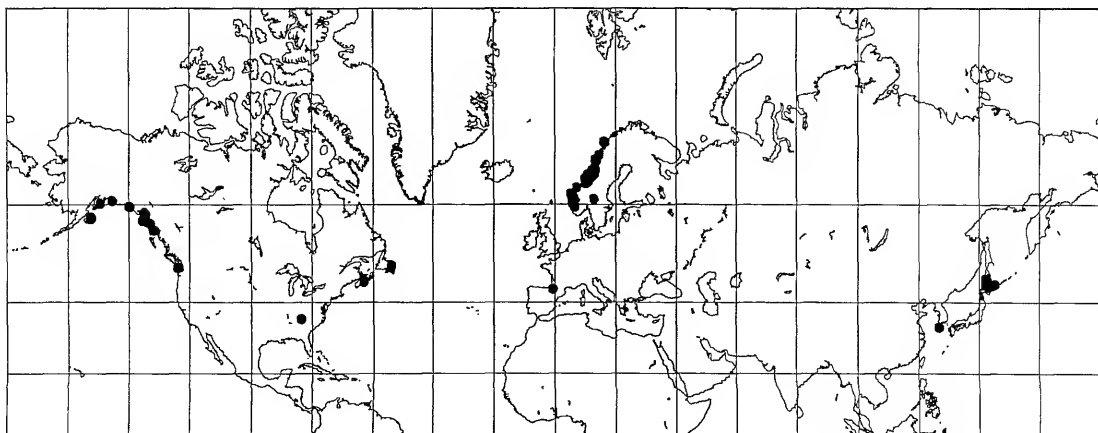


Fig. 1. Distribution of *Lecidea roseotincta*.

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References

- Ahti T. 1977. Lichens of the boreal coniferous zone. In: Seaward M. R. D. (ed.), Lichen Ecology. pp. 145–181. Academic Press, New York.
- Boom van den P. P. G., Etayo J. and Breuss O. 1995. Interesting records of lichens and allied fungi from the Western Pyrenees (France and Spain). Crypt. Bryol.-Lichénol. **16**: 263–283.
- Coppins B. and Tønsberg T. 1988. *Lecidea roseotincta*, a new lichen species from Norway. Nord. J. Bot. **8**: 415–418.
- Hämet-Ahti L., Ahti T. and Koponen T. 1974. A scheme of vegetation zones for Japan and adjacent regions. Ann. Bot. Fennici **11**: 59–88.
- Kashiwadani H., Moon K. H., Inoue M., Thor G. and Kim Y. S. 2002. Lichens of the Cheju Island, Republic of Korea. 1. The macrolichens. National Science Museum Monographs **22**: 115–135.
- Muhr L. E. 1991. *Lecidea roseotincta* and *Psilolechia clavulifera* nya för Sverige. Graphis Scripta **3**: 52–53.
- Tønsberg T. 1993. Additions to the lichen flora of North America. Bryologist **96**: 138–141.
- 2004. Additions to the lichen flora of Great Smoky Mountains National Park. All taxa biodiversity inventory newsletter (ATBI Quarterly) **5**(1): 6.
- Lecidea roseotincta* (シコウチイ, 新称) は、ヘリトリゴケ科の固着地衣類である。地衣体には特徴的な紫紅色の色素を含み、裂芽や粉芽を欠く。果殻はほとんど発達せず、1–2室の子嚢胞子を8–16個生じる子嚢を持ち、プソローム酸を含むので近縁種からは容易に区別できる。
- 本種はこれまでにノルウェー、スエーデン、北米、フランスから報告されているがアジアからの報告はなかった。筆者らの1995–2001年に行われた日本と韓国内の野外調査で得られた標本を精査した結果、アジアでは北海道と済州島（韓国）に産することが判明したので報告する。本種は北半球周極要素の分布を持つが、現在のところアジアでは上記の地域以外では採集されていない。
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